

Attorney Docket No. LEAP:125US  
U.S. Patent Application No. 10/810,773  
Reply to Office Action of December 22, 2006  
Date: March 22, 2007

**Current Status of the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of the Claims:**

Claim 1 (currently amended): A microscope stage assembly, comprising:  
a stage having a left side and a right side;  
a microscope stage drive mechanism having an end shaped to be detachably secured to the underside of said stage on the left or the right side of said stage;  
a first engagement means for [[a]] said microscope stage drive mechanism positioned at a first hole at a first location on the left side of said stage, wherein said end of said drive mechanism is receivable into said first hole to detachably secure said drive mechanism at said first location of said stage; and,  
a second engagement means for said microscope stage drive mechanism positioned at a second hole at a second location on the right side of said stage, wherein said end of said drive mechanism is receivable into said second hole to detachably secure said drive mechanism at said second location of said stage.

Claim 2 (original): The microscope stage assembly recited in Claim 1 wherein said first location further comprises a rack operatively arranged to engage the microscope stage drive mechanism.

Claim 3 (original): The microscope stage assembly recited in Claim 1 wherein said first location further comprising a belt and pulley operatively arranged to engage the microscope stage drive mechanism.

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Claim 4 (original):                   The microscope stage assembly recited in Claim 1 wherein said first engagement means further comprising a set screw to detachably secure said stage drive mechanism to said stage.

Claim 5 (original):                   The microscope stage assembly recited in Claim 1 wherein said first engagement means further comprising a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.

Claim 6 (original):                   The microscope stage assembly recited in Claim 1 wherein said second location further comprises a rack operatively arranged to engage the microscope stage drive mechanism.

Claim 7 (original):                   The microscope stage assembly recited in Claim 1 wherein said second location further comprising a belt and pulley operatively arranged to engage the microscope stage drive mechanism.

Claim 8 (original):                   The microscope stage assembly recited in Claim 1 wherein said second engagement means further comprising a set screw to detachably secure said stage drive mechanism to said stage.

Claim 9 (original):                   The microscope stage assembly recited in Claim 1 wherein said second engagement means further comprising a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.

Claim 10 (original):                  The microscope stage assembly recited in Claim 1 in combination with a microscope.

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Claim 11 (original):                   The microscope stage assembly recited in Claim 1 in combination with a microscope stage drive mechanism.

Claim 12 (withdrawn):                 A microscope stage drive mechanism, comprising:  
  an inner drive shaft having a plunger head;  
  an outer drive shaft, arranged coaxially with respect to said inner drive shaft, said outer drive shaft having a pinion; and,  
  a means to detachably secure said microscope stage drive mechanism to a microscope stage.

Claim 13 (withdrawn):                 The drive mechanism recited in Claim 12 wherein said means to detachably secure the drive mechanism further comprises a collar having a groove, wherein said groove is operatively arranged for receipt of an engagement means.

Claim 14 (withdrawn):                 The drive mechanism recited in Claim 12 in combination with a microscope.

Claim 15 (withdrawn):                 The drive mechanism recited in Claim 12 in combination with a microscope stage assembly.

Claim 16 (currently amended):         An interchangeable microscope stage drive assembly, comprising:

  a microscope stage having a left side, a right side and a hole on each of the left and a hole on the right side sides of said stage; and,

  a stage drive mechanism detachably securable to said microscope stage to the left [[and]] or right side of said stage, wherein said drive mechanism is detachably secured to said stage by inserting an end of said drive mechanism in one of said holes at said right [[and]] or left side of said stage.

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Claim 17 (original):                   The assembly recited in Claim 16 further comprising a set screw to detachably secure said stage drive mechanism to said stage.

Claim 18 (currently amended):        The assembly recited in Claim 16 further comprising An interchangeable microscope stage drive assembly, comprising:

a microscope stage having a left side, a right side and a hole on each of the left and the right sides of said stage;

a stage drive mechanism detachably securable to said microscope stage to the left or right side of said stage, wherein said drive mechanism is detachably secured to said stage by inserting an end of said drive mechanism in one of said holes at said right or left side of said stage; and,

    a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.

Claim 19 (original):                   The assembly recited in Claim 16 further comprising a belt and pulley operatively arranged to effect lateral movement of a slide holder.

Claim 20 (previously presented):    The assembly recited in Claim 16 further comprising a rack and pinion operatively arranged to effect lateral movement of a slider holder.

Claim 21 (original):                   The assembly recited in Claim 16 further comprising a belt and pulley operatively arranged to effect forward and backward movement of said stage.

Claim 22 (original):                   The assembly recited in Claim 16 further comprising a rack and pinion operatively arranged to effect forward and backward movement of said stage.

Claim 23 (original):                   The assembly recited in Claim 16 in combination with a microscope.

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Claim 24 (withdrawn):                   The assembly recited in Claim 16, wherein said drive mechanism comprises:

an inner drive shaft having a plunger head; and,

an outer drive shaft, arranged coaxially with respect to said inner drive shaft, said outer drive shaft having a pinion.

Claim 25 (withdrawn):                   The assembly recited in Claim 24 wherein said plunger head comprises a frustoconical surface.

Claim 26 (withdrawn):                   The assembly recited in Claim 24 wherein said plunger head comprises a cylindrical surface.

Claim 27 (withdrawn):                   The assembly recited in Claim 24 wherein said plunger head comprises a curved surface.

Claim 28 (withdrawn):                   The drive mechanism recited in Claim 24, wherein said plunger head comprises a friction clutch having the ability to slip.

Claim 29 (withdrawn):                   The drive mechanism recited in Claim 24, wherein said plunger head is spring biased to provide an engaging force.

Claim 30 (withdrawn):                   The drive mechanism recited in Claim 24, wherein said plunger head contacts a drive pulley, said pulley mounted for rotation in said microscope stage.

Claim 31 (withdrawn):                   The drive mechanism recited in Claim 24, further comprising a drive member transferring a driving force to said stage.

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Claim 32 (withdrawn):                   The drive mechanism recited in Claim 24, in which said outer drive shaft pinion is a gear.

Claim 33 (withdrawn):                   The drive mechanism recited in Claim 24 in combination with a microscope.